

Appl. No. 09/823,127
Amdt. Dated January 14, 2008
Reply to Office Action of October 31, 2007

REMARKS/ARGUMENTS

This Amendment is in response to the Office Action mailed October 31, 2007. In the Office Action, claims 1-28 were rejected under 35 U.S.C. §103. Reconsideration in light of the remarks made herein is respectfully requested.

Responses to the Examiner's arguments

1. Frame fragmentation indicator is appended to end of the first data segment:

In the Office Action, the Examiner contends that including the first frame fragmentation indicator within a trailer would have been obvious (Office Action, pages 2-3). Applicant respectfully disagrees and maintains that White does not disclose frame fragmentation indicator being appended to end of the first data segment because the trailer does not contain a field indicating the first subframe 140 is the initial subframe in the sequence (White, par. [0045]), as admitted by the Examiner (Office Action, page 2). An explanation is provided below.

2. Promote transmission of a high priority frame over the low priority frame:

White does not disclose or render obvious to promote transmission of a high priority frame over the low priority frame, as recited in claims 1, 9, 16, and 21. The Examiner states that arguments regarding this limitation are moot since the limitation merely conveys the intended use of the first frame fragmentation information (Office Action, page 3), citing MPEP 2111.04. Applicant respectfully disagrees.

As stated in MPEP § 2111.04, claim scope is not limited by claim language that suggests or makes optional but does not require steps to be performed, or by claim language that does not limit a claim to a particular structure (MPEP § 2111.04). Here, the language "to promote transmission of a high priority frame over the low priority frame" does not suggest or make optional. It is not to convey the intended use, either. It further substantiates the structure of the first data segment that the frame fragmentation control information is appended to end of the first data segment. The sending unit 205 generates frame fragments (Specifications, page 5, lines 16-18) and includes frame fragmentation control information in the frame fragments (Specifications, page 10, lines 22-23). The strategic placement of frame fragmentation control information 310 at the end of a frame fragment 300 provides advantages in promoting the transmission of high priority frames over the transmission of low priority frames (Specifications, page 6, lines 18-22).

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As such, the added language provides further specificity to the location of the frame fragmentation control information in the frame fragments.

In addition, the language "to promote transmission of a high priority frame over the low priority frame" is added to a first operation to be performed in method claim 21. The first frame fragment being transmitted includes the frame fragmentation control information appended to the end of the first data segment (Specifications, page 12, lines 8-14). The frame fragmentation control information being appended to end of the first data segment to promote transmission of high priority over low priority frames is not merely a suggestion but rather it is part of the operation.

3. Unobvious difference:

The Examiner contends that Applicant has failed to argue why inclusion of such information within a trailer as opposed to a header is an unobvious difference (Office Action, page 3-5). Applicant respectfully disagrees.

Satisfying the initial burden of presenting a prima facie case requires more than making conclusory statements that one of ordinary skill in the art would have done the same. Here, the Examiner alleges that one of ordinary skill would have been taught at least by White and at most by his or her knowledge regarding placing information at the beginning or end of a frame (Office Action, page 5). However, this is not sufficient to establish a prima facie case of obviousness.

As argued in the previous response, the mere fact that White specifically separates into the header and the trailer indicates that White does not disclose or suggest appending the frame indicator at the end of the subframe. White is well aware of the trailer, but even White did not see that appending to end of the first data segment would be more efficient. Please refer to the Specifications for further discussion on appending the frame indicator at the end of a subframe.

Therefore, given that White discloses a trailer and an end and does not disclose the trailer containing a field indicating the first subframe 140 being the initial subframe in the sequence (White, par. [0045]), the prima facie case of obviousness is not established by the Examiner.

Rejection Under 35 U.S.C. § 103

In the Office Action, the Examiner rejected claims 1-28 under 35 U.S.C. §103(a) as being unpatentable over U.S. Publication No. 2002/0150100A1 issued to White ("White") in view of U.S. Patent No. 5,828,835 issued to Isfeld ("Isfeld"). Applicant respectfully traverses the

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rejection and submits that the Examiner has not met the burden of establishing a *prima facie* case of obviousness.

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. *MPEP* §2143, p. 2100-126 to 2100-130 (8th Ed., Rev. 5, August 2006). Applicant respectfully submits that there is no suggestion or motivation to combine their teachings, and thus no *prima facie* case of obviousness has been established.

Furthermore, the Supreme Court in *Graham v. John Deere*, 383 U.S. 1, 148 USPQ 459 (1966), stated: "Under § 103, the scope and content of the prior art are to be determined; differences between the prior art and the claims at issue are to be ascertained; and the level of ordinary skill in the pertinent art resolved. Against this background, the obviousness or nonobviousness of the subject matter is determined." *MPEP* 2141. In *KSR International Co. vs. Teleflex, Inc.*, 127 S.Ct. 1727 (2007) (Kennedy, J.), the Court explained that "[o]ften, it will be necessary for a court to look to interrelated teachings of multiple patents; the effects of demands known to the design community or present in the marketplace; and the background knowledge possessed by a person having ordinary skill in the art, all in order to determine whether there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue." The Court further required that an explicit analysis for this reason must be made. "[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness." *KSR* 127 S.Ct. at 1741, quoting *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006). In the instant case, Applicant respectfully submits that there are significant differences between the cited references and the claimed invention and there is no apparent reason to combine the known elements in the manner as claimed, and thus no *prima facie* case of obviousness has been established.

White discloses a method and apparatus for adaptive frame fragmentation. Upon an arrival of another communication frame within a higher priority queue, the communication frame

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is segmented into a first subframe and a second subframe (White, paragraph [0044]). The first subframe includes identifying fields in the form of a first fragmentation header and a first fragmentation trailer (White, paragraph [0044]).

Isfeld discloses a high throughput message passing process using latency and reliability classes. A receive buffer has one receive list indicating data needing normal-priority attention and another receive list indicating data needing high-priority attention (Isfeld, col. 27, lines 49-54). The receive list bit definition includes bits 10 through 15 to determine the channel over which the IOP received the message (Isfeld, col. 28, lines 9-11).

White and Isfeld, taken alone or in any combination, do not disclose, suggest, or render obvious, at least one of (1) a first frame fragmentation control information appended to end of the first data segment to promote transmission of a high priority frame over a low priority frame, and (2) the first frame fragmentation control information including at least (i) a first frame fragmentation indicator to indicate if the first frame fragment is a first fragment generated from the frame, (ii) a frame fragment sequence number specifying a sequential order number assigned to the first frame segment, and (iii) a channel number, as recited in claim 1; or (1) a frame fragmentation control information appended to end of the payload data to enable the frame fragments to be reassembled into the frame, and (2) the frame fragmentation control information including at least two of (i) a first frame fragmentation indicator to indicate if the first frame fragment is a first fragment generated from the frame, (ii) a frame fragment sequence number, and (iii) a channel number, as recited in claim 9; or (1) a frame fragmentation control information appended to end of the payload data to promote transmission of a high priority frame over a low priority frame and to enable the frame fragments to be reassembled into the frame, and (2) the frame fragmentation control information including a first frame fragmentation indicator to specify whether a frame fragment is a first fragment generated from the frame, as recited in claim 16; or (1) a first frame fragmentation control information appended to end of the first data segment, and (2) the first frame fragmentation control information including at least a frame fragmentation indicator to indicate if the first frame fragment is a first fragment generated from the frame and a frame fragment sequence number to specify a sequential order number assigned to the first frame fragment generated from the low priority frame, as recited in claim 21.

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White merely discloses a subframe including a fragmentation header and a fragmentation trailer (White, paragraph [0045]), not a frame fragmentation control information. The fragmentation header is at the beginning of the subframe, not appended to end of the data segment. Therefore, to transmit a subframe, White's teaching requires that two separate sets of information to be included in the subframe: a header at the beginning and a trailer at the end. The header contains a field indicating that the first subframe 140 is the initial subframe in the sequence (White, paragraph [0045]). The header is at the beginning of a subframe. In contrast, the claimed invention provides for a first frame fragment indicator to be appended at the end of the data segment or the payload data. The mere fact that White specifically separates into the header and the trailer indicates that White does not disclose or suggest appending the frame indicator at the end of the subframe. White is well aware of the trailer, but even White did not see that appending to end of the first data segment would be more efficient.

In addition, White does not disclose or render obvious to promote transmission of a high priority frame over a low priority frame, as recited in claims 1, 9, 16, and 21. As argued above, this language does not suggest or make optional. It is not to convey the intended use either. It further substantiates the structure of the first data segment that the frame fragmentation control information is appended to end of the first data segment (MPEP § 2111.04).

Furthermore, the fragmentation trailer at the end of the subframe merely contains a parameter F which indicates whether the associated subframe is the final subframe (White, paragraph [0047]), not including at least one, or two, of (i) a first frame fragmentation indicator, (ii) a frame fragment sequence number specifying a sequential order number assigned to the first frame segment, and (iii) a channel number.

Isfeld merely discloses a free list in a receive buffer (Isfeld, col. 27, lines 33-37), not a sending unit. Furthermore, Isfeld merely disclose bits to determines the channel over which the message is received (Isfeld, col. 28, lines 9-11; col. 29, lines 24-25), not transmitted. Accordingly, Isfeld effectively teaches away from the claimed invention.

In addition, neither White nor Isfeld discloses, suggests, or renders obvious an extension indicator as recited in claims 8, 15, 20, and 28. The seven least significant bits in the fragmentation trailer 180 are used to ensure all fragment trailers are distinguished from all fragment headers and other framing headers (White, paragraph [0047]), not used to extend or add

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fields to the frame fragment control information as performed by the extension indicator. The formats of the fragmentation header and trailer are fixed (White, Figures 8 and 9; paragraphs [0046]-[0047]). Therefore, they cannot be extended to include additional fields. Similarly, Isfeld merely discloses 4 bits to be appended to the top 28 bits to create the message address for all transfers (Isfeld, col. 25, lines 32-35), not to extend or add additional fields.

There is no motivation to combine White and Isfeld because neither of them addresses the problem of efficient transmission of prioritized data. There is no teaching or suggestion that appending frame fragmentation control at end of a data segment or payload data is present. White, read as a whole, does not suggest the desirability of appending only the fragmentation control and a channel number. For the above reasons, the rejection under 35 U.S.C. §103(a) is improperly made.

The Examiner failed to establish a prima facie case of obviousness and failed to show there is teaching, suggestion, or motivation to combine the references. When applying 35 U.S.C. 103, the following tenets of patent law must be adhered to: (A) The claimed invention must be considered as a whole; (B) The references must be considered as a whole and must suggest the desirability and thus the obviousness of making the combination; (C) The references must be viewed without the benefit of impermissible hindsight vision afforded by the claimed invention; and (D) Reasonable expectation of success is the standard with which obviousness is determined. Hodosh v. Block Drug Co., Inc., 786 F.2d 1136, 1143 n.5, 229 USPQ 182, 187 n.5 (Fed. Cir. 1986). "When determining the patentability of a claimed invention which combined two known elements, 'the question is whether there is something in the prior art as a whole suggest the desirability, and thus the obviousness, of making the combination.'" In re Beattie, 974 F.2d 1309, 1312 (Fed. Cir. 1992), 24 USPQ2d 1040; Lindemann Maschinenfabrik GmbH v. American Hoist & Derrick Co., 730 F.2d 1452, 1462, 221 USPQ (BNA) 481, 488 (Fed. Cir. 1984). To defeat patentability based on obviousness, the suggestion to make the new product having the claimed characteristics must come from the prior art, not from the hindsight knowledge of the invention. Interconnect Planning Corp. v. Feil, 744 F.2d 1132, 1143, 227 USPQ (BNA) 543, 551 (Fed. Cir. 1985). To prevent the use of hindsight based on the invention to defeat patentability of the invention, this court requires the Examiner to show a motivation to combine the references that create the case of obviousness. In other words, the Examiner must

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show reasons that a skilled artisan, confronted with the same problems as the inventor and with no knowledge of the claimed invention, would select the prior elements from the cited prior references for combination in the manner claimed. In re Rouffet, 149 F.3d 1350 (Fed. Cir. 1996), 47 USPQ 2d (BNA) 1453. "To support the conclusion that the claimed invention is directed to obvious subject matter, either the references must expressly or implicitly suggest the claimed invention or the Examiner must present a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the references." Ex parte Clapp, 227 USPQ 972, 973. (Bd.Pat.App.&Inter. 1985). The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. In re Mills, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990). Furthermore, although a prior art device "may be capable of being modified to run the way the apparatus is claimed, there must be a suggestion or motivation in the reference to do so." In re Mills, 916 F.2d at 682, 16 USPQ2d at 1432; In re Fritch, 972 F.2d 1260 (Fed. Cir. 1992), 23 USPQ2d 1780.

Moreover, the Examiner failed to establish the factual inquires in the three-pronged test as required by the Graham factual inquires. There are significant differences between the cited references and the claimed invention as discussed above. Furthermore, the Examiner has not made an explicit analysis on the apparent reason to combine the known elements in the fashion in the claimed invention. Accordingly, there is no apparent reason to combine the teachings of White and Isfeld.

In the present invention, the cited references do not expressly or implicitly disclose any of the above elements. In addition, the Examiner failed to present a convincing line of reasoning as to why a combination of White and Isfeld is an obvious application of appending fragmentation control information at end of data segments, or an explicit analysis on the apparent reason to combine White and Isfeld in the manner as claimed.

Therefore, Applicant believes that independent claims 1, 9, 16 and 21 and their respective dependent claims are distinguishable over the cited prior art references. Accordingly, Applicant respectfully requests the rejection under 35 U.S.C. §103(a) be withdrawn.

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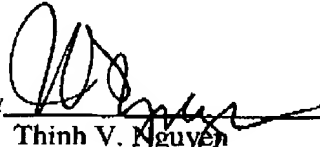
Applicant respectfully requests that a timely Notice of Allowance be issued in this case.

Respectfully submitted,

BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP

Dated: January 14, 2008

By



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